

4.10 PUBLIC SERVICES AND UTILITIES

This section describes the existing public services and utilities that serve San Quentin State Prison (SQSP) and evaluates the project's potential effect on these services and utilities. This section covers:

- police services,
- fire protection and emergency services,
- wastewater treatment and disposal,
- water supply,
- solid waste, and
- electricity and natural gas.

The proposed project would be located within SQSP and would not include any new housing that would increase the number of students in the project area. Therefore, the proposed project would not have an impact on schools, and this resource topic will not be addressed further in this DEIR.

4.10.1 POLICE SERVICES

EXISTING CONDITIONS

SQSP and the surrounding area are served by the Marin County Sheriff's Department (Sheriff). The Kentfield Substation, one of three substations that provide general law enforcement services in the unincorporated communities of Marin County, provides law enforcement services to SQSP. The Kentfield Substation is located approximately 4.7 miles west of the project site and employs 11 staff. When a situation arises that requires a heightened response level, aid from adjacent substations is provided. The nonemergency response time from the Kentfield Substation to the project site is 10 minutes or less, with a maximum response time of approximately 30 minutes, depending on traffic conditions. The emergency response time is approximately 5 minutes, with a maximum response time of approximately 10 minutes, depending on traffic conditions (Taylor, pers. comm., 2007).

The Twin Cities Police Department provides law enforcement services to the cities of Larkspur and Corte Madera. The Twin Cities Police Department's service area borders the service boundary of the Sheriff and the two share responsibility for traffic management along Sir Francis Drake Boulevard.

Land uses surrounding the project site consist primarily of open space and residential uses. Criminal activity is reported to be low, with approximately 78 calls occurring over a 12-month period in 2006 (Taylor, pers. comm., 2007). Crowd control is sometimes required when large crowds congregate in San Quentin Village near the East Gate, usually when execution of an inmate is planned to occur. California Department of Correction and Rehabilitation (CDCR) and the Sheriff have entered into a mutual aid agreement to provide adequate response during these and other events. Under this agreement, the Sheriff provides deputies for crowd control and CDCR reimburses the Sheriff for expenses incurred. Typically, protests require less than 30 officers and can last several hours, but rarely last more than 8 hours (Augustus, pers. comm., 2004).

REGULATORY BACKGROUND

No plans, policies, regulations, or laws are applicable to the proposed project related to police services.

ENVIRONMENTAL IMPACTS OF THE PROJECT

Threshold of Significance

The project would have a significant adverse impact on police services if it would:

- result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts to maintain acceptable service ratios, response times, or other performance objectives for law enforcement.

Effects on Law Enforcement

CDCR would continue to provide its own on-site security personnel (i.e., correctional officers), and CDCR's existing mutual aid agreement with the Sheriff would continue with implementation of the project. It is anticipated that the number of service calls from SQSP would not change with the project because the project would not change any uses on the site. Further, response times to the project site would not substantially decrease because no off-site improvements are proposed that would interfere with local roadway systems and the project would not substantially increase traffic volumes along local roadways (see Section 4.11, "Transportation"). Staff of the Sheriff have indicated that no new deputies, substations, or other facilities would be required to serve the project and that the project would not interfere with their ability to continue to provide law enforcement services in the community (Taylor, pers. comm., 2007).

Because the Sheriff anticipates that existing staff levels would be adequate to serve the project without affecting their ability to provide services elsewhere, and response times to the project site would not increase, the project would have a less-than-significant impact on law enforcement services (4.10-a).

PROPOSED MITIGATION MEASURES

Less-than-Significant Impacts

The following impact was identified as less than significant, and therefore no mitigation is required:

4.10-a: Effects on Law Enforcement

4.10.2 FIRE PROTECTION AND EMERGENCY SERVICES

EXISTING CONDITIONS

SQSP provides its own on-site fire protection services. The SQSP fire station is located on prison grounds, approximately 700 feet west of the project site, near the warehouse buildings. The station employs a total of 21 field and administrative personnel (i.e., one fire chief, one hazmat specialist, four fire captains, and 15 inmate firefighters). During weekdays, one fire chief, one fire captain, one hazmat specialist, and 15 inmate firefighters are on duty. During evenings and weekends, the fire captain and firefighters are on-duty. Equipment at the station includes two fire engines and one ambulance. The fire station responded to approximately 700 calls at SQSP in 2006, mostly for emergency medical response. Engine response time to the project site is between 2 and 5 minutes. Currently, the fire station does not have any mutual aid agreements with other local fire agencies (McNitt, pers. comm., 2007).

The Ross Valley Paramedic Authority (RVPA), as part of the Ross Fire Department, provides back-up ambulance service to SQSP. RVPA operates two ambulance units for a region that consists of eight separate communities in the Ross Valley area, including SQSP, Corte Madera, Larkspur, Kentfield, Ross, San Anselmo, Sleepy Hollow, Fairfax, and County Service Area 27. This paramedic unit responds to approximately 1,500 calls per year (County of Marin 2007).

REGULATORY BACKGROUND

No plans, policies, regulations, or laws are applicable to the proposed project related to fire protection and emergency services.

ENVIRONMENTAL IMPACTS OF THE PROJECT

Thresholds of Significance

The project would result in a significant adverse impact to fire services if the project would:

- result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for fire protection.

Effects on Fire Protection Services

The project would result in the demolition of the existing Building 22, and construction of a new building on the project site that would require fire protection services in the event of a fire emergency. The project would also include the construction of a new medical warehouse located on the grounds of SQSP, but outside the secure perimeter. The CHSC and medical warehouse would include the construction of fire safety systems including alarms, extinguishers, and sprinklers that automatically respond in the event of a fire emergency. Based on conversations with CDCR staff, no new fire personnel or equipment would be required to serve the CHSC or medical warehouse (McNitt, pers. comm., 2007). The CHSC would be constructed close to existing buildings within SQSP and no new fence systems would be constructed between the fire station and the CHSC; therefore, response times to the CHSC would not increase. Because the medical warehouse building would be constructed outside the secure perimeter, response times to this building would be slightly longer. However, no new fence systems would be constructed between the fire station and the medical warehouse.

Because the project would not substantially affect the SQSP fire station's ability to provide fire protection services at SQSP, and emergency response times would not substantially increase, the project would have a less-than-significant impact on fire protection services (4.10-b).

Effects on Emergency Services

RVPA provides transport for prisoners that can no longer be cared for at SQSP to nearby hospitals when private ambulance services are not able to respond. Responding to these emergency calls from SQSP is an existing hardship for RVPA because calls from SQSP take up to three times longer than a typical call (Sinnott, pers. comm., 2007). This lengthy response time causes the responding ambulance unit to be out of service for an unacceptable period of time and leaves only one ambulance unit to respond to calls during this time. The project would not substantially affect ambulance service needs at SQSP. The proposed project would expand the existing medical facilities at SQSP, but would not change the number of inmates housed at SQSP. The level of treatment would not be different such that medical conditions currently requiring treatment at an off-site medical facility would still require off-site treatment. While it is likely that, with improved medical services on-site, the health of inmates can be better maintained and fewer cases requiring off-site treatment would occur, the change in numbers of inmates requiring ambulance transport cannot be projected. Consequently, although medical services would be improved on-site, the project would not substantially alter or eliminate the need for off-site ambulance services. The proposed project is not expected to change conditions for ambulance service providers that currently serve SQSP.

The project would improve medical services provided on-site and may reduce the number of inmates requiring emergency medical services, but the change in demand for off-site services is difficult to project, and is not likely to affect emergency services provided by off-site providers. The project would not exacerbate or substantially improve existing emergency services provided by off-site providers; therefore, this impact would be less than significant (4.10-c).

PROPOSED MITIGATION MEASURES

Less-than-Significant Impacts

The following impacts were identified as less than significant, and therefore no mitigation is required:

4.10-b: Effects on Fire Protection Services

4.10-c: Effects on Emergency Services

4.10.3 WASTEWATER TREATMENT AND DISPOSAL

The analysis provided in this section is based on *Technical Memorandum No. 2, Water and Wastewater Projections and Capacity Assessment* (EDAW 2004) and projected wastewater generation rates for the proposed project.

EXISTING CONDITIONS

Regional Wastewater Conveyance and Treatment Facilities

The Central Marin Sanitation Agency (CMSA) is responsible for wastewater treatment services for SQSP and the surrounding vicinity. Areas currently served by CMSA include Sanitary District No. 1 (consisting of Ross Valley, Larkspur, and SQSP), Corte Madera Sanitation District, and San Rafael Sanitation District. Wastewater generated at SQSP is transported through several force main pipelines that are large in diameter to a regional wastewater treatment plant (WWTP) located less than 1 mile north of the project site.

The CMSA WWTP treats wastewater received at the plant to a secondary level (i.e., mechanical and biological treatment), and has a treatment capacity of 10 million gallons per day (mgd) in dry weather and up to 30 mgd in wet weather. Currently the WWTP treats an average of approximately 8 mgd and SQSP currently generates approximately 0.72 mgd of the wastewater conveyed to the WWTP.

SQSP Wastewater Collection Facilities

Wastewater from SQSP is collected through a network of gravity sewers and small pump stations that convey wastewater to a larger on-site pump station (hereafter referred to as the SQSP pump station), located at SQSP west of the project site. Wastewater from San Quentin Village is also pumped to the SQSP pump station. SQSP operates one side (i.e., the wet side) of the pump station, including the wet well, and Ross Valley Sanitary District maintains and operates the other side (i.e., the dry side) of the pump station, including the wastewater pumps. The pump station has three nonclog centrifugal pumps that run at a constant speed at 30 horsepower. Each pump is rated at 1,200 gallons per minute (gpm) (two on duty and one on standby). The wastewater pump station is equipped with pretreatment facilities consisting of grinders that shred large debris in the wastewater stream so that all particles are carried freely, under normal flow conditions, through the sanitary sewer system.

From the on-site pump station, the combined (i.e., SQSP and San Quentin Village) wastewater flow is pumped through the 18-inch-diameter force main pipeline in San Quentin that is operated and maintained by the Ross Valley Sanitary District. This 18-inch main pipeline connects to the 54-inch-diameter force main pipeline in Ross Valley, located approximately 0.5 mile west of the site along Sir Francis Drake Boulevard. The 54-inch force

main is maintained by CMSA and conveys the wastewater to the regional WWTP. The CMSA discharges its treated wastewater in San Francisco Bay.

Existing SQSP Wastewater Flows

The average dry-weather flow of wastewater from SQSP is approximately 0.72 mgd with maximum day flows of 1.5 mgd. The unit wastewater flow per inmate for this time period averaged 118 gallons per inmate per day (EDAW 2004).

REGULATORY BACKGROUND

San Francisco Bay Regional Water Quality Control Board

If not properly treated, wastewater can reduce the quality of receiving waters (i.e., surface waters and groundwater aquifers). In California, the nine regional water quality control boards (RWQCBs), under the supervision of the State Water Resources Control Board (SWRCB), are responsible for protecting surface, ground, and coastal waters throughout the state. SQSP is in the jurisdiction of the San Francisco Bay RWQCB. The RWQCB develops standards (limits) restricting the concentration and loading of pollutants that can be discharged into a water body, and enforces these standards by requiring authorization before discharges of potential waterborne pollutants. Authorization for projects involving wastewater discharge is referred to as waste discharge requirements and includes standards for pollutant levels in the discharge.

Central Marin Sanitation District

CMSA's discharge to San Francisco Bay is monitored and regulated by the San Francisco Bay RWQCB through issuance of a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit outlines monitoring and reporting requirements for CMSA's discharge. CMSA regulates commercial, industrial, and institutional discharges to the wastewater collection system. CMSA regulates SQSP through wastewater discharge Permit S001-10, which outlines effluent limitations (pollutants and maximum allowable concentrations), monitoring requirements, reporting requirements, general conditions, and noncompliance penalties for wastewater that is conveyed to the CMSA.

ENVIRONMENTAL IMPACTS OF THE PROJECT

Thresholds of Significance

The project would have a significant impact on the existing wastewater collection, treatment, and disposal system if it would:

- result in a demand for wastewater treatment service that is substantial in relation to the remaining WWTP capacity or if the demand exceeds the capacity;
- require or result in the construction or expansion of new wastewater treatment facilities, the construction of which could cause significant environmental effects; or
- not meet wastewater treatment requirements of the San Francisco Bay RWQCB.

Impacts to Existing Wastewater Services and Facilities

Wastewater generated at the CHSC and the medical warehouse is estimated based on a unit wastewater generation rate of 150 gallons per day per inmate. The project would add 10 additional medical beds to the 40 medical beds that currently exist. Workers added by the proposed project would result in the generation of an additional 10 gallons per day (gpd) per worker of wastewater under maximum day conditions (Bobic, pers. comm., 2007). The new medical warehouse would include one restroom, which would require connections to existing wastewater

facilities. However, the medical warehouse would not increase the number of inmates or workers and would not increase wastewater generation.

At full capacity (i.e., 50 in-patient beds and approximately 310 employees) the CHSC would generate a total of approximately 10,600 gpd of wastewater. However, at least 75% of this total is currently being generated by the existing facilities. Therefore, the project's incremental increase in wastewater generation would be approximately 2,250 gpd.

Each of the three existing pumps at the SQSP wastewater pump station has an individual pumping capacity of 1.73 mgd. Assuming that two identical pumps operate in parallel, and the third pump is used as standby, the pump station has a total capacity of 3.46 mgd. The maximum amount of wastewater flows the projected project is designed to handle in combination with existing SQSP flows would not exceed the maximum design capacity of the SQSP pump station. Based on the preliminary design analysis, the existing pump station would have sufficient capacity to accommodate project-related wastewater flows. The 18-inch force main pipeline that exists at SQSP would also adequately accommodate project-related wastewater flows at maximum design capacity for the CHSC and medical warehouse.

The CMSA WWTP is rated to handle 10 mgd flows in dry weather conditions and currently receives approximately 8 mgd of wastewater. The project would increase flows at the CMSA WWTP by 2,250 gpd average dry-weather flow (i.e., 10 beds and 75 employees), which is well within CMSA's existing available capacity. This increased demand for wastewater treatment is not substantial in relation to remaining capacity, and the CMSA WWTP is expected to be able to accommodate project-related wastewater flows.

Wastewater flows related to the proposed project would not exceed existing available conveyance capacity of the SQSP pump station and the existing force main pipelines. Further, the CMSA WWTP is expected to have available capacity to treat project-related wastewater flows. Therefore, the project would have a less-than-significant impact on wastewater facilities (4.10-d).

Consistency with Wastewater Treatment Requirements

Similar to existing operations at the SQSP, project-related wastewater flows and loads would be required to meet existing regulatory requirements. The flow and loading characteristics of SQSP wastewater is regulated by CMSA under Permit S001-10. This permit authorizes SQSP to discharge industrial wastewater into the sanitary sewer system. The permit provides effluent limitations for pollutants in the wastewater stream in addition to general discharge prohibitions (such as prohibition of heated discharges or discharge with a pH less than 6.0 or greater than or equal to 12.5). As required by Permit S001-10, CMSA conducts monitoring at SQSP to confirm whether SQSP is within the adopted permit limitations. These monitoring efforts are conducted on a quarterly basis.

The water quality of the CMSA discharge is regulated and monitored by the San Francisco Bay RWQCB through an adopted NPDES permit. CMSA's NPDES permit establishes effluent limitations, monitoring requirements, and reporting requirements for wastewater discharged to San Francisco Bay.

The projected increase in wastewater flows and loadings would not substantially change the characteristics of the wastewater conveyed to CMSA such that it would cause the SQSP to exceed existing permit limitations.

Because SQSP would continue to take all measures to comply with existing monitoring requirements of CMSA and the RWQCB, and the project would not substantially change the characteristics of the wastewater conveyed to the CMSA WWTP, the project would have a less-than-significant-impact on wastewater quality (4.10-e).

PROPOSED MITIGATION MEASURES

Less-than-Significant Impacts

The following impacts were identified as less than significant, and therefore no mitigation is required:

4.10-d: Impacts to Existing Wastewater Supplies and Facilities

4.10-e: Consistency with Wastewater Treatment Requirements

4.10.4 WATER SUPPLY

The analysis provided in this section is based on consultation with the Marin Municipal Water District (MMWD) and the *Urban Water Management Plan* prepared by MMWD in 2005.

EXISTING CONDITIONS

Regional Water Supply Facilities

MMWD provides potable water to approximately 190,000 people in an area of Marin County that covers 147 square miles, including SQSP. The maximum water demands in MMWD's service area are approximately 31,500 acre-feet per year (afy). The operational yield of MMWD's existing system is 29,300 afy (MMWD 2005), which means that MMWD is currently operating under a 2,200 afy supply shortfall under maximum water demand conditions. MMWD defines operational yield as the yield that would limit 25% water rationing to once every 50 years, and 10% water rationing to once every 10 years. The current shortfall in water supplies means that MMWD must implement water rationing more frequently than would be necessary if they were supplying water at their operational yield. As a result, MMWD has implemented water conservation measures (i.e., low-flow showers and toilets) throughout its service area to decrease its water demands. The average water demands in MMWD's service area (with conservation measures in place) are approximately 28,600 afy.

The primary water source for MMWD is rainfall captured on the western slopes of the coastal range in a watershed north of Mount Tamalpias. This water is stored in seven different reservoirs. Five reservoirs are on Mount Tamalpias (Lagunitas, Phoenix, Alpine, Bon Tempe, and Kent) and two reservoirs are located in West Marin (Nicasio and Soulajule). MMWD's total reservoir storage capacity is approximately 80,000 acre-feet (MMWD 2005).

To supplement the reservoir supply, MMWD has an agreement with Sonoma County Water Agency (SCWA) for the delivery of up to 8,000 afy of Russian River water. Under this agreement, MMWD is allowed to take a portion of the entitled water during the summer, if the supply and conveyance capacity are available. The Russian River water is conveyed to MMWD via the 30-inch-diameter North Marin Aqueduct, which is owned by the North Marin Water District (NMWD). MMWD and NMWD have an intertie agreement that allows Russian River water to be conveyed through NMWD's pipelines, as long as it does not adversely affect availability of water to NMWD users (i.e., demands of NMWD and MMWD together do not exceed the conveyance capacity of the aqueduct). The demand for Russian River water by SCWA and NMWD is expected to increase. If the demand does increase as expected, less would be available to NMWD, which translates to less water available to MMWD. This would exacerbate the operational yield deficit within the MMWD service area.

To further increase available water supplies, MMWD is evaluating increasing its water supply options to include a seawater desalination plant with a potential ultimate capacity of 15 mgd. The most suitable site for a desalination facility appears to be at the MMWD-owned Pelican Way site in San Rafael. Pilot tests conducted in 1990 demonstrated that desalination could produce drinking water that was both safe and palatable. Since that time, treatment technologies have improved, and new regulatory requirements exist today that could impact permitting and operation of a full-scale desalination facility. Therefore, MMWD conducted an approximately 1-year Seawater Desalination Pilot Program using more advanced seawater reverse osmosis technologies to update the

pilot work done in 1990. An EIR evaluating this 1-year pilot program is scheduled for release in 2007 (MMWD 2007).

Regional Water Reclamation and Conservation

MMWD recycles approximately 2.2 mgd of wastewater from the treatment plant of the Las Gallinas Valley Sanitation District. Wastewater conveyed to the Las Gallinas treatment plant undergoes tertiary treatment before being conveyed to MMWD's recycled water treatment plant for additional treatment. The reclaimed water is then distributed via a separate pipeline system to more than 250 customers in northern San Rafael. The reclaimed water is used for irrigating public landscaping, parks, toilet flushing, car washes, air conditioning, cooling towers, and commercial laundries (MMWD 2005).

MMWD encourages water conservation throughout Marin County through a variety of programs. MMWD has a tiered rate structure that penalizes excessive water use and a strict "water waster" ordinance to penalize water waste and encourage the use of water-saving fixtures and appliances. MMWD offers voluntary conservation programs such as rebates to businesses for installing water efficient dishwashers, toilets and clothes washers. MMWD's Landscape Ordinance 385, adopted by the board of directors on March 3, 1999, provides guidance for designing and installing landscapes and irrigation systems that conserve water. In April 2002, the MMWD Board of Directors also strengthened the existing water waster ordinance (District Code 6.02) to target water users that have not corrected problems with their irrigation equipment, allowing MMWD to assess financial penalties. Despite a 10% population increase, the average annual water demand in 2005 was less than the water demand in 1987 because of these types of water conservation programs (MMWD 2005).

Regional Groundwater Supplies

The area surrounding SQSP consists of uplifted metamorphic rock with little groundwater storage capacity. Only one small aquifer in the Ross Valley area consists of young alluvium deposits. The relatively small size of the Ross Valley aquifer limits the available safe yield. Because of the number of existing water supply wells using this source, additional water supply from this source is not available.

There are no known aquifers in the immediate vicinity of SQSP. There have been reports of a small spring on the slope to the north of the main prison buildings. Given the limited recharge area available, the existing spring is probably supplied from a small perched aquifer that would not have sufficient safe yield to supply water for the project. Because CDCR does not propose to use groundwater to serve the project, this issue is not addressed further in this DEIR.

SQSP Water Supply and Use

Existing Water Supply Facilities

Potable water is used at SQSP in inmate cells, kitchen facilities, on-site personnel housing, vocational programs, fire protection, and for minimal landscape irrigation. Laundry facilities were discontinued several years ago, and instead, prison laundry is shipped to California State Prison, Solano.

SQSP receives its potable water supply from MMWD. A 16-inch pipeline conveys water along Sir Francis Drake Boulevard. This pipeline is reported to be in good condition up to its intersection with the prison West Gate. However, as the pipeline heads east along Sir Francis Drake Boulevard toward Interstate 580 (I-580), it downsizes to a 12-inch diameter pipe that is reported to be in poor condition (Winzler & Kelly 2004). From this pipeline, the water is pumped via a booster pump station and conveyed to SQSP through two service meters located on the west side of I-580. The meters serve a water main that is 12 inches in diameter. The water main delivers potable water to a 3 million gallon concrete storage reservoir located on a hill in the northeast portion of SQSP property. The reservoir is separated into two 1.5 million gallon sections to allow half of the tank to be taken out of service

for maintenance or repairs as needed. Potable water is delivered from the storage reservoir to SQSP facilities through water distribution pipelines that are 10 and 12 inches in diameter.

Historical Water Demand

CDCR has a contracted water entitlement with MMWD of 861.2 afy. Water demands at SQSP steadily increased from 1997 through 2004 from 794.2 afy to 1,004.7 afy, and then began to decline in 2005 to 928.3 afy. In 2006, a total of approximately 290 million gallons, or 890 afy, of water was used by SQSP (Daniels, pers. comm., 2007). This total exceeds SQSP's existing 861.2 afy annual water entitlement from MMWD by 28.8 afy.

In response to higher than desired water demands, SQSP has begun installation of automated flush valves on existing toilets at the main prison facilities. These automated flush valves regulate the frequency of toilet flushes, reducing the number of flushes per day by approximately 50%. In addition, the flush valves use only 1.9 gallons-per-flush compared to the 3.5 gallons-per-flush valves that were previously in use at the prison. Installation of the automated flush valves has resulted in the decrease in water demands in 2005 and 2006, and are expected to continue to reduce water demands as the toilet retrofits are completed. When completed, the toilet retrofits are expected by MMWD to reduce water demand by an additional 264 afy, for a total reduction of 327 afy from the 2004 peak use of 1,004.7 afy. This would reduce SQSP existing water demands to an estimated 626 afy. Once completed, SQSP will be below its contracted water entitlement with MMWD.

REGULATORY BACKGROUND

MMWD's primary regulation of water supply to nonresidential customers is through the water entitlement process. Water entitlement is defined as "the maximum amount of water the District is committed to supply any individual service on an annual basis" (District Code 11.08.180). Entitlements are either based on the historical water use for a site or the amount purchased through connection fees, which are based on calculations performed by MMWD's Engineering Department. The calculations take into consideration, the type of use on-site and the number of people on-site. Water entitlement from MMWD must be reviewed when a project is proposed. The entitlement review assesses the change in water use associated with the project and determines if the project proponent must purchase additional water entitlement from the district. The entitlement process ensures that the water use at a site corresponds with the water entitlement. If water use exceeds the entitlement, thereby exceeding the water budget and baseline, the water bill may be substantially increased.

In general, projects that result in an increase in water demand of 100 afy or more would be considered by MMWD to have a potentially significant effect on existing available water supplies (McGuire, pers. comm., 2004).

ENVIRONMENTAL IMPACTS OF THE PROJECT

Thresholds of Significance

The project would have a significant adverse impact on water supplies if it would:

- require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects; or
- not have sufficient water supplies available to serve the project from existing entitlements and resources and/or would require new or expanded entitlements.

Additionally, MMWD staff generally use an estimated 100 afy of new demand as a threshold of significance.

Effects on Water Demand and Supply

The proposed project would not increase inmate population levels at SQSP; however, the project would increase the number of workers and medical beds at SQSP. Installation of toilet retrofits to reduce existing and future water demand levels is underway. Although the historical water demands at SQSP has been reduced, water demands (i.e., 890 afy) are still higher than SQSP's contract entitlement with MMWD (i.e., 861.2 afy).

As with many water users, the rate of water use at SQSP is not consistent throughout the day. Rather, water use is subject to peak flows that correspond to concentrated use associated with water-intensive activities such as showering and landscape irrigation. A peaking factor of 2.0 was used to calculate maximum-day water demand. As shown in Table 4.10-1, the project would increase the maximum daily water demand by 4,500 gpd.

Table 4.10-1 Projected Incremental Water Demands for the Central Health Services Center		
Average Day Demand	= 75 workers x 10 gpd/worker + 10 medical beds x 150 gpd/bed	2,250 gpd
Max Day Peaking Factor		2
Max Day Demand	= 2,250 x 2	4,500 gpd
Annual Demand	= average day x 365 days	0.8 mg (2.5 afy)
Note: gpd = gallons per day Source: Data compiled by EDAW in 2007.		

The average and maximum day water demands would need to be met by MMWD. The peak fire flow demands would be met by water stored in the existing 3 million gallon water storage tank at SQSP.

The MMWD *Urban Water Management Plan* projected that water demands in the district would increase to 36,000 afy over the next 20 years. These projections were based on population estimates from the Association of Bay Area Governments and likely did not include this project. Further, these projections exceed MMWD's existing, available, approved supplies by approximately 7,000 afy. The project's increased water demands (i.e., 800,000 gallons per year or 2.5 afy) would not be substantial in relation to MMWD's existing service area demands (i.e., 29,300 afy), nor would these demands substantially increase existing water demands at SQSP. Further, once the flush control valves, described above, are installed, expected annual demand at SQSP would be 626 afy, well less than the contracted entitlement of 861.2 afy. The addition of the project flows would increase future daily use to 629 afy, still within the entitlement.

The addition of the proposed project would not exceed MMWD's threshold for significant water supply impacts (i.e., 100 afy), and would not result in a substantial increase in water use at SQSP.

The project is estimated to increase water demands by 2.5 afy. Because this water demand would not exceed MMWD's threshold for a significant water supply impact (i.e., 100 afy), this would be a less-than-significant impact (4.10-f).

Demand for New Water Supply Facilities

Because water supply to SQSP is provided by MMWD, the project's contribution to demands for new water supply facilities would be combined with other demands in MMWD's service area. The project's contribution would be a cumulative impact, which is discussed further in Chapter 5, "Cumulative Impacts," of this DEIR.

Effects on Water Supply Facilities

The proposed project would receive water service from two connections: MMWD's existing 16-inch water line, which runs along Sir Francis Drake Boulevard on the west side of the project site, and from SQSP's existing 12-inch pipeline located on the east side of the project site. The existing 16-inch pipeline along Sir Francis Drake Boulevard is reported to be in good condition up to its intersection with the West Gate. However, as the pipeline heads east along Sir Francis Drake Boulevard toward I-580, it downsizes to a 12-inch diameter pipeline, which is reported to be in poor condition (Winzler & Kelly 2004).

The CHSC building would connect to existing domestic water lines that run north-south on either side of the existing Building 22. No upgrades to the existing pipelines would be required to meet the needs of the CHSC. Water would be supplied to the medical warehouse via connections to water lines that currently serve nearby buildings.

Because the proposed project would not require upgrades to the existing water distribution system and would not adversely affect the provision of water to existing SQSP facilities, this would be a less-than-significant impact (4.10-g).

Effects on Water Storage Facilities

SQSP currently uses, and would continue to use, water from the existing 3 million gallon storage tank to meet operational storage, water storage for fighting fires, and reserve storage needs. Demands on operational water storage at the SQSP occur when fluctuations in peak demands exceed the supply capacity of the MMWD system. With implementation of the project, the SQSP's (entire site) operational demands would be approximately 0.8 million gallons.

The water storage tank provides water supplies to meet the largest single fire demand at SQSP, which is estimated to be 3,000 gpm for 4 hours. With implementation of the project, SQSP would not require additional fire water storage capacity because the CHSC would replace an existing building and construction of the medical warehouse would have a minimal affect on water storage for fires. Therefore, the existing 3 million gallon water storage tank would provide adequate storage with implementation of the project.

The existing water storage tank would provide adequate water storage for operational, fire, and reserve flows with implementation of the project. Further, the project would not increase the potential frequency of events requiring stored water. Therefore, the project would not adversely affect existing water storage facilities. This would be a less-than-significant impact (4.10-h).

PROPOSED MITIGATION MEASURES

Less-than-Significant Impacts

The following impacts were identified as less than significant, and therefore no mitigation is required:

4.10-f: Effects on Water Demand and Supply

4.10-g: Effects on Water Supply Facilities

4.10-h: Effects on Water Storage Facilities

4.10.5 SOLID WASTE

EXISTING CONDITIONS

SQSP generated 3,673,720 tons of solid waste in 2006, which is collected by SQSP employees and transported to the Marin Resource Recovery Center (MRRC) (transfer station), located in San Rafael. The MRRC is operated by

Marin County Sanitary Service. After approximately 1,437,720 tons of recycling materials including newspaper, cardboard, glass, and metals have been removed from the waste stream, approximately 2,236,000 tons of solid waste is hauled to the Redwood Sanitary Landfill for disposal. SQSP also disposes its wood furniture wastes (i.e., sawdust) from the on-site furniture factory at MRRC, and the MRRC recycles the sawdust as an ingredient in compost.

The Redwood Sanitary Landfill, owned by Waste Management, Inc., is located approximately 3.5 miles north of the city of Novato in Marin County. The landfill covers approximately 420 acres and has a permitted disposal area of approximately 210 acres. The Redwood Sanitary Landfill is a permitted Class III solid waste facility that can receive nonhazardous solid wastes and treated sewage sludge (Waste Management, Inc. 2003). The maximum permitted capacity of the landfill is 19.1 million cubic yards and it can accept a maximum of 2,300 tons of solid waste per day. The Redwood Sanitary Landfill has a remaining capacity of approximately 12 million cubic yards (California Integrated Waste Management Board 2004a and 2004b).

SQSP currently runs a Recycling and Salvage Program (RASP). The RASP recovers used paper, cardboard, aluminum, burlap, egg crate material, and glass from SQSP operations to reduce the quantity of solid waste delivered to the Redwood Sanitary Landfill.

REGULATORY BACKGROUND

The California Waste Management Act of 1989 (Assembly Bill [AB] 939) required state, county, and local governments to substantially decrease the volume of waste disposed at landfills by the year 2000. Marin County adopted a County Integrated Waste Management Plan, in compliance with AB 939 that included the Source Reduction and Recycling Element (element). The element (adopted in March 1992) outlined a course of action for meeting the state's mandate of diverting 50% of the waste stream from landfill disposal by the year 2000. Diversion may include source reduction, recycling, composting, and limited transformation, such as wood incineration. Marin County Sanitary Service is in compliance with AB 939's 50% recycling requirement because it currently recycles 65% of waste it collects.

ENVIRONMENTAL IMPACTS OF THE PROJECT

Thresholds of Significance

The project would have a significant adverse impact on the existing solid waste collection and disposal system if it would:

- not be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- not comply with federal, state, and local statutes and regulations related to solid waste.

Effects on Solid Waste Disposal Facilities

Implementation of the project would result in an increase in the municipal solid waste that is generated at SQSP. Approximately 7,000 cubic yards of solid waste would be generated during demolition of the existing Building 22 including concrete, rebar, brick, wood, steel and miscellaneous metals and debris. Solid waste generated during demolition would be sorted on-site and disposed of at an appropriate facility. The project would maximize the diversion of building debris from disposal at landfills to facilities where materials are accepted for reuse. An additional 2,000 to 3,000 cubic yards of soil may be generated by construction of the project. This soil material would be trucked off-site to an appropriate disposal facility.

Operation of the new CHSC and medical warehouse could also cause a slight increase in solid waste generation. Although CDCR intends to maintain existing inmate population levels at SQSP, it is anticipated that solid waste

generation rates would be increased because of the additional workers, facilities, and services that are part of the proposed project. The increase in solid waste generation is not expected to be substantial compared to existing solid waste generation rates.

With implementation of the project, SQSP would continue the RASP program to reduce the volume of solid waste hauled off-site. Continued implementation of the RASP under the project would reduce the gross tonnage of solid waste generated by approximately 40%.

SQSP currently complies with CDCR's goals for solid waste source reduction, substitution, and conservation. For example, SQSP does not use paper towels in the kitchen or health services areas, most food supplies (cleaning products and other supplies) are purchased in bulk quantities with minimum packaging materials, and SQSP does not use disposable utensils or serving containers. These operational practices would be implemented at the CHSC and medical warehouse.

The Redwood Landfill has available capacity to handle the increase in solid waste generated by the project. The project would not substantially affect landfill capacity, would not result in the construction of new solid waste disposal facilities, and would not impair waste management disposal services.

Because the project would not adversely affect landfill capacity, would not result in the construction of new solid waste disposal facilities, and would not impair waste management disposal services, this impact would be less than significant (4.10-i).

PROPOSED MITIGATION MEASURES

Less-than-Significant Impacts

The following impact was identified as less than significant, and therefore no mitigation is needed:

4.10-i: Effects on Solid Waste Disposal Facilities

4.10.6 ELECTRICITY AND NATURAL GAS

The analysis provided in this section is based on a Predesign Engineering Report previously prepared for the San Quentin Condemned Inmate Complex Project (Winzler & Kelly 2004) and information provided by CDCR.

EXISTING CONDITIONS

Regional Setting

Electricity and natural gas service in Marin County is provided by Pacific Gas and Electric Company (PG&E). PG&E provides electric and natural gas service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. The service area stretches from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. PG&E's electrical power comes from a diverse mix of generating sources including fossil-fueled plants, hydroelectric powerhouses, and a nuclear power plant. PG&E also buys power from independent power producers and other utilities. PG&E's natural gas service facilities include over 46,000 miles of natural gas pipelines that serve 4 million gas customer accounts. PG&E's gas piping system delivers natural gas from three major sources: Canada, Southwestern United States, and California (PG&E 2004).

Local Setting

Existing electrical facilities at SQSP include two overhead 15-kilovolt (kV) transmission lines, one from the San Rafael Substation and one from the Greenbrae Substation. The existing 15-kV transmission lines are capable of supporting SQSP's existing 3.3-megawatt load. The transmission lines connect to an on-site substation located in

the southeastern portion of SQSP. These facilities currently provide adequate service to SQSP. SQSP currently uses approximately 3.3 megawatts of electricity. In 2006, SQSP used a total of approximately 1,219 megawatts of electricity (Daniels, pers. comm., 2007).

Natural gas at SQSP is purchased from PG&E. A distribution line that is 6 inches in diameter and contains 25 pounds per square inch (psi) of natural gas serves SQSP. The distribution pipeline enters SQSP near West Gate and runs east across the project site to the existing main meter house located approximately 0.75 mile inside the prison at the intersection of the H-Unit building and Valley Road. The main meter house contains a PG&E-owned meter and SQSP-owned submeters. Gas distribution piping radiates from the main meter house to various points throughout SQSP. The existing natural gas facilities currently provide adequate service to SQSP. SQSP uses approximately 162,077 therms of natural gas per month and during 2006, total natural gas usage at SQSP was 1,944,919 therms (Daniels, pers. comm., 2007).

REGULATORY BACKGROUND

The California Building Code Title 24, Part 6, establishes building energy efficiency standards for new construction (including requirements for new buildings, additions, alterations, nonresidential buildings, and repairs). Energy efficiency standards were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. New standards were adopted in 2001 as mandated by AB 970 to reduce California's electricity demand. The new standards went into effect on June 1, 2001. Currently the 2005 building energy efficiency standards are being developed in response to AB 970 (Statutes of 2000) and Senate Bill 5X (Statutes of 2001; outdoor lighting building standards). The updated standards were adopted by the California Energy Commission in November 2003 and took effect on October 1, 2005 (California Energy Commission 2004).

ENVIRONMENTAL IMPACTS OF THE PROJECT

Thresholds of Significance

The project would have a significant impact on electricity or natural gas if it would:

- result in an increase in demand for electricity or natural gas service that is substantial in relation to the existing demands; or
- require or result in the construction of new electrical or gas facilities, the construction of which could cause significant environmental effects.

Effects on Electricity Supplies

Although CDCR intends to maintain existing population levels at SQSP, the construction of new buildings may cause a slight increase in electrical demands at the SQSP regardless of the number of inmates using the new CHSC. However, because the services provided by the new CHSC and medical warehouse are currently being provided in dispersed locations throughout SQSP, the project's electrical demands would not be substantially different than existing conditions. Further, CDCR is pursuing Leadership in Energy and Environmental Design (LEED®) certification for the CHSC. LEED® certification is a third-party verification that a building meets high-performance standards for design, operation, and energy conservation. There are different levels of LEED® certification including certified, silver, gold, and platinum. Projects are awarded points based on established criteria for specific areas including building sustainability, water efficiency, energy efficiency and atmosphere, materials and resources, indoor environmental quality, and innovation in design. CDCR is pursuing a certification or silver level of LEED® certification. With LEED® certification, the CHSC building could result in less energy demands compared to existing conditions.

The existing SQSP electrical load is 3.3 megawatts. The anticipated electrical load at the CHSC has been conservatively estimated to be between 1.2 and 1.4 megawatts. The project in combination with existing SQSP facilities would result in a total electrical load between 4.5 and 4.7 megawatts. The increase in demand for electricity at the site would be minimal in relation to the total PG&E demands within their service area. Therefore, there would be little affect on PG&E's ability to provide electricity to their service area.

In addition, a standby electrical generator would be included in the project design for the CHSC. This generator would use diesel or other fuels and would be rated as required to provide emergency power to essential facilities, including lights, security systems, and medical equipment.

Although the project could cause a slight increase in demand for electricity, the project's demands would not exceed existing available electrical supplies, and the project would not adversely affect PG&E's ability to provide electrical services to its existing customers. Therefore, the project would have a less-than-significant impact on electricity services (4.10-j).

Effects on Natural Gas Supplies

Although CDCR intends to maintain existing population levels at SQSP, the construction of the new CHSC and medical warehouse may cause a slight increase in demand for natural gas at the SQSP regardless of the number of inmates using the CHSC. However, because the services provided by the new CHSC and medical warehouse are currently being provided in dispersed locations throughout SQSP, the project's demand on natural gas would not be substantially different from existing conditions. Natural gas would be used at the CHSC and medical warehouse for heating purposes.

The project's maximum peak fuel consumption is estimated to be approximately 525,600 therms of natural gas per year. This increase combined with the existing yearly natural gas consumption at SQSP (approximately 2 million therms) results in a total demand of 2.1 million therms. Therefore, this increase in demand would be minimal in relation to existing on-site demands, and this demand would be minimal compared to PG&E's capacity.

Although the project would cause a slight increase in the demand for natural gas supplies at the site, the project's demand would not exceed existing available supplies. Further, the project demand would be minimal compared to PG&E's capacity. Therefore, the project would have a less-than-significant impact on natural gas services (4.10-k).

Effects on Electrical Facilities

The existing PG&E electrical facilities serving SQSP consist of two overhead 15-kV transmission lines that can each support a 2.6 megawatt load (5.2 megawatts total). Currently, both 15-kV transmission lines are necessary to supply adequate electricity at SQSP. With implementation of the project, the existing 15-kV transmission lines would have adequate capacity to serve the proposed CHSC load (1.2 to 1.4 megawatts) plus the existing SQSP load (3.3 megawatts). Use of both 15-kV transmission lines would be required to meet the SQSP's total anticipated electricity demand of between 4.5 and 4.7 megawatts.

The existing PG&E transmission lines that serve the existing 15-kV substation (Substation 1) are located in the southeast portion of the prison. Electrical power is distributed from Substation 1 to SQSP buildings through loop-feeder circuits of 15 kV for normal and emergency power. The existing substation would be adequate to serve the project. On loss of normal electrical power, the standby generators would automatically provide emergency power.

Although the project would cause a slight increase in electrical demand, no upgrades to existing electrical facilities or substations would be required. Therefore, this would be a less-than-significant impact (4.10-l).

Effects on Natural Gas Facilities

Because of the minimal demand for natural gas, it is expected that the existing 6-inch, 25 psi, natural gas distribution line serving SQSP would have adequate capacity to serve existing SQSP facilities and the proposed CHSC and medical warehouse. Therefore, the project would not require the expansion of any natural gas facilities.

Because the project would not adversely affect the provision of natural gas services at SQSP, and existing capacity is available in PG&E's existing gas distribution line, this would be a less-than-significant impact (4.10-m).

PROPOSED MITIGATION MEASURES

Less-than-Significant Impacts

The following impacts were identified as less than significant, and therefore no mitigation is needed:

4.10-j: Effects on Electricity Supplies

4.10-k: Effects on Natural Gas Supplies

4.10-l: Effects on Electrical Facilities

4.10-m: Effects on Natural Gas Facilities